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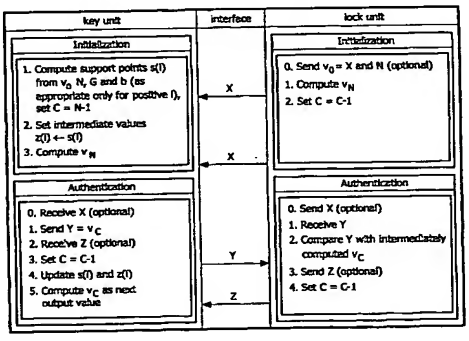
(54) Title: USE-AUTHORIZATION DEVICE FOR SECURITY-RELATED APPLICATIONS



(57) Abstract: This description is given of a use-authorization device for security-related applications, in particular access control to secure areas or securing vehicles with a useroperated key unit for generating consecutive, alternating user code information which exhibits a sequence of consecutive function values $v_{i+1} = F(v_i, const)$ for $i = 0,\ldots, N$ through the repeated use of a one-way function $F(v_i, const)$, which function values are used in inverse order to the sequence formation to create the consecutive user code information, and an application-sided processing unit for determining actual authorization information which is dependent upon the user code information received from the key unit and for performing a use-authorization checking process by comparing this actual authorization information with target authorization information saved in the application, as well as for generating use-release information depending on the result of the comparison, wherein the target authorization information has a function value v; which has been transferred from the user code information processed during the previous positive use-authorization operation. The special feature of the invention is that there is a certain number of levels G provided, with at least one support point and one intermediate value, from which a certain number of iterative function value calculations can be performed in each level by means of the one-way function $F(v_i, const)$wherein there are $G = L(N) / b$levels, with N as the starting value, $L(N)$ as the number of bits required for representing N in the dual system and b as the basis.

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